REMARKS

Claims 1 through 111 are pending in the present application. In the Office Action dated March 24, 2005, the Examiner rejected claims 1-111 under 35 U.S.C.§112, first paragraph, as failing to comply with the written description requirement. The Examiner also rejected claims 1-111 under 35 U.S.C.§112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

The Examiner further rejected claims 1-111 under 35 U.S.C.§102(b) as anticipated by U.S. Patent No. 6,249,714 to Hocaoglu, *et al.* ("Hocaoglu"). Claims 1-111 are also rejected under 35 U.S.C.§102(b) as anticipated by U.S. Patent No. 6,535,795 to Schroeder, *et al.* ("Schroeder"). Applicants disagree with the stated grounds of rejection and desire to further clarify various distinctions of the applicant's invention over the cited art. Reconsideration of the present application is therefore requested in light of the present amendment and following remarks.

The disclosed embodiments of the invention may be discussed in comparison to the prior art. It is understood, however, that the discussion of the disclosed embodiments, as well as the discussion of the differences between the disclosed embodiments of the present invention and the prior art do not define the scope or interpretation of any of the claims. Instead, such discussed differences, when presented, are offered merely to help the Examiner appreciate important claim distinctions as they are discussed.

The Examiner has cited the Hocaoglu reference as pertinent to the patentability of claims in the present application. Hocaoglu discloses a virtual design module that is used in a networked environment to generate product designs that are optimized with regard to cost and/or production cycle. The virtual design module (that includes a "evolutionary intelligent agent") generates *a population* of competing designs and combines the population of competing designs with cost and cycle time information and processes the population using a genetic algorithm. Briefly, and in general terms, a genetic algorithm utilizes a selected population (the "genetic

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pool") of potential solutions and combines the population to form offspring, or even mutations from the population, in order to solve a given adaptive problem. The offspring population is evaluated for fitness according to selected criteria, and then successively and selectively recombined to generate a progressively a population that is more fit than a previous population.

The Examiner has also cited the Schroeder reference for disclosing an optimization system that uses one or more rules sets to model a physical product. In particular, the disclosed system includes a plurality of intelligent software objects ("ISO's") that are configured to maintain a record of events associated with a process, such as a chemical synthesis process. Accordingly, the plurality of ISO's are configured to communicate with sensor objects that are operable to generate state information for the process. The state information may be continuous, or discrete with respect to time. The Examiner is referred to column 4, lines 40 through 67, and column 5, lines 1 through 5 for this disclosure. The ISO's are also configured to solve adaptive problems using genetic algorithms, as previously discussed.

The various embodiments of the present invention disclose systems and methods for generating and optimizing data models for an integrated product. In a particular embodiment, a rules set, which may include information obtained from an existing product line of the integrated products, is used to develop a first "draft" of the desired integrated product (page 7, lines 6-7). The draft may be continuously operated upon by contributing groups (*e.g.,* additional engineering personnel) that contribute additional and/or different rules to the rules set, and further iterations of the draft are generated that conform to the additional and/or different rules. At each iteration of the draft, the contributors may evaluate the suitability of the draft by reviewing a "score" that reflects compliance with the constraints as expressed in the rules set.

Accordingly, the present invention does not rely upon the formulation of a population of alternative solutions to an adaptive problem that are successively bred, cross-bred, or even mutated, as is well understood when a genetic algorithm is employed. Accordingly, applicants respectfully submit that the Hocaoglu and Schroeder references fail to disclose, or even fairly

suggest formulating *a first data model*. Instead, the references teach the formulation of a *population* of data models that are subjected to at least one of a breeding step, a cross-breeding step, and a mutation step in formulating an optimal data model.

Accordingly, applicant respectfully submits that claims 1, 38 and 75 are allowable over the cited art. Claims depending from claims 1, 38 and 75 are also now allowable based upon the allowability of the base claims, and further in view of the additional limitations present in the dependent claims.

With respect to the Examiner's rejections under 35 U.S.C.§112, second paragraph, applicants have amended claims 1, 38 and 75 to remove the recitation of "relating", which was objected to by the Examiner. In addition, and specifically with regard to the Examiner's objection to the recitation of "optimizing the first data model", applicant has amended the foregoing claims to recite that the first data model is optimized by applying the uniform rule set to the first data model to generate a second data model. Applicant respectfully submits that the present amendments fully address the Examiner's grounds for rejection and are supported by the specification.

Turning now to the Examiner's rejections based upon 35 U.S.C.§112, first paragraph, the Examiner asserts that no criteria are described that would permit a model to be optimized. Applicant respectfully disagrees. The optimization process involves the repeated application of the rule set to the contemplated design. For example, at page 7, lines 7-9, the specification clearly states that "...the inventive system then iterates the application of rules, to optimize the model 500...". Further, at page 8, lines 17 through 19, the specification clearly states that: "...After several iterations, the model is optimized...[by] producing a rating indicative of a 'score' for compliance.". Nevertheless, in the interests of further clarity, applicant has amended claims 1, 38 and 75 to recite that examining the second data model includes compiling at least one compliance measure based upon the rule set, and that generating a subsequent input file is based upon an examination of the compliance measure.

For the foregoing reasons, applicant respectfully requests reconsideration and withdrawal of the rejections of claims 1-111. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to call the undersigned at his convenience.

Respectfully submitted,

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MAIL CERTIFICATE

I hereby certify that this communication is being deposited with the United States Postal Service via first class mail under 37 C.F.R. § 1.08 on the date indicated below addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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